

# Center for Genetic Improvement of Livestock

Von Mendenhall/Noelle Cockett/Utah State University/Logan, Utah

*Established in 1991 to outline methods of genetically improving livestock using the rapidly evolving technologies of genetic markers and embryo cloning.*

Overview	Technologies	Status	Economic Impact
<p>1994-95 State Contract \$98,500</p> <p>Matching Funds \$149,500</p> <p>Cumulative \$347,500</p> <p>Center Related Jobs 9</p> <p>Industry Jobs Created 0</p> <p>Benefiting Utah Companies:</p> <p>1994 Spinoft companies 0</p> <p>Cum. Spinoft companies 0</p> <p>Patents Applied 1</p> <p>Patents Issued 0</p> <p>License Agreements 1</p>	<p>The two technologies being developed within this Center include:</p> <ul style="list-style-type: none"> <li>•the identification of genetic markers that are associated with reduced fat and increased muscle in sheep and</li> <li>•the improvement of embryo cloning efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>•A genetic marker associated with heavy muscling and reduced fat in sheep has been developed.</li> <li>•A flock of sheep carrying the callipyge gene responsible for heavy muscling has been established at USU.</li> <li>•Characterization of the heavy muscling trait is ongoing.</li> <li>•Ovine oocyte activation rate has been improved using a new procedure developed by the Center.</li> <li>•Working with SBDC consultant to establish commercialization plan.</li> </ul>	<ul style="list-style-type: none"> <li>•The Center has determined that the callipyge gene provides an additional \$16.06 to the value of each marketed sheep. If just 25% of the sheep in Utah carried the callipyge gene, the total added value impact to Utah would be \$1.405 million.</li> <li>•Center has initiated negotiations with the USU Biotechnology Center concerning the commercialization of the callipyge genetic marker. Additional markers will be isolated and incorporated into the genetic test.</li> <li>•Animals carrying the callipyge gene are being distributed to Utah sheep producers.</li> </ul>